Response ID:625 Data

1. BOSC 2017 Nominations

Self Nomination:

No

Nominator Information

First Name

Caroline

Last Name

Trupp Gil

Nominator Title

Director of Federal Relations, American Chemical Society

Street Address

Exemption 6

Mobile Phone

Nominee Information

First Name

Juan

Last Name

Colberg

Nominee Title

Sr. Director of Chemical Technology & Innovation and Pfizer Green Chemistry Program Leader

Street Address

Exemption 6

Email Address

Exemption 6

[redacted]

[redacted]

[redacted]

[redacted]

Employment Information

Place of Employment/Work:

Pfizer Inc. Worldwide Research & Development

Work Street Address

445 Eastern Point Road, MS 8156-050

Work City

Groton

Work State:

Connecticut

Work Postal Code

06340

Work Phone Number

203-215-1642

Work Email Address

juan.colberg@pfizer.com

Sector

Industry

Qualifications

Primary Area(s) of Expertise

Executive Committee (EC)
• Research Program Evaluation

Chemical Safety for Sustainability (CSS) and Human Health Risk Assessment (HHRA) Subcommittee
• Green Chemistry
• Chemical Risk Assessment
• Chemical Risk Management

Committee Preference(s)

Executive Committee
Chemical Safety for Sustainability and Human Health Risk Assessment Subcommittee

Statement of Interest

My interest in green chemistry and sustainability dates back when I first started working at Pfizer Inc. Joining a company where I could work improving people's lives by helping developing life-saving-drugs while working with top science was my dream job. In addition, very early in my career I learned that the development of environmentally responsible processes is possible while also making them cost-effective.

During my almost 25 years career at Pfizer I have been involved in several initiatives associated to these two topics.

I have a proven track on delivering to process development for new drugs using my expertise in organic

synthesis, significant experience of drug development and application across projects from research to established products using green chemistry principles. As a result of my work on this area, I was one of the team members recognized by the EPA with the 2002 Presidential Green Chemistry Award for "Green Chemistry in the Re-Design of the Setraline Process. I have also contributed with several scientific publications and book chapters in this area.

My project experience within R&D and commercial division at Pfizer spans the breadth of product discovery to commercial delivery, working alongside medicinal chemistry to operation of manufacturing equipment for commercial delivery. My experience allows me to understand issues and converse at a foundational level with all technical disciplines. In addition, my green chemistry participation within Pfizer and global green chemistry network offer me a unique position of influence in this area.

In addition on working in process development, I have vast experience generating and evaluating multiple cradle to grave Life-Cycle-Analysis across a range of Pfizer products with different delivery technologies. This includes the development and use of tools to align our process improvements to corporate strategic environmental goals, also linking them to business opportunities for our organization and the pharmaceutical industry in general.

Alongside influencing green chemistry through tools, best practices and metrics I also verse on Global environmental legislation issues with a view to future manufacturing and/or sourcing within our supply chain operations. One example is the work I do with our EHS division tracking the EU REACH regulation monitoring status of established products supply routes with a goal of completing impact assessments to ensure the uninterrupted supply of products.

Green chemistry and science of sustainability are not in contradiction to business sounds decision that could lead to more cost effective operations, my experience in Pfizer and the pharmaceutical industry in general could help to translate this into new technology development and general environmental initiatives at the EPA. I strongly believe that Green Chemistry and Sustainability can serve as an excellent vehicle to various industries to deliver on their sustainability goals while making a deep impact on their triple bottom line; profit, people and planet.

Skills/qualifications related to committee preference(s) specified

In my role as Sr. Director of Technology & Innovation at Pfizer's Worldwide Research & Development I lead our chemistry technologies efforts to evaluate/develop alliances with external partners, including academic institutions and technology companies across the globe, to deliver 'platform' technologies suitable for greener/ environmentally sound chemical manufacturing of our products.

Numerated List
1. Green Chemistry and sustainability: technology development and business case assessment
2. Environmental Regulations
3. Commercial manufacturing and impact on the environment.
4. New technology assessment /development-
5. Experience on the Creation of Technology Hubs

Other Relevant Information

CV/Resume URL

2. CV/Resume

Please upload your CV/ Resume.

Colberg_CV.pdf

3.

BOSC Nomination

Jun 29, 2017 10:56:59 Success: Email Sent to: tracy.tom@epa.gov

> 4. Thank You for your Submission!

JUAN C. COLBERG, Ph.D.

Exemption 6 [redacted]

PROFESSIONAL PROFILE

People Manager Project Management Organic Synthesis Sourcing Green Chemistry

Green Chemistry. Sustainability. Flow Chemistry.Excellent large programs management. Excellent managerial skill supervising medium to large group of scientists. Highly focused individual with expertise in synthetic organic chemistry, Green Chemistry and Engineering, process development, and project management. Extremely effective at multi-tasking and time management. Excellent communication, organization and presentation skills with the ability to thrive in a multi-functional team environment. Vast experience managing businesses with CMOs. Business Development activities for new and existent technologies.

EXPERIENCE

-2010-present Senior Director Technology and Innovation (T&I) and Pfizer Green Chemistry Program Leader (2015-present)
Pfizer Global Research &Development Groton Connecticut Laboratories

Leads the PTxPharmaceutical Science/T&I API technology effort to drive the external facing process to evaluate alliances with external partners, including academic institutions and private sector across the globe. In conjunction with Pharmaceutical Science scientific leaders work closely with Pfizer Global Supply (PGS) to identify 'platform' technologies suitable for API manufacturing. Works with business development and finance in the evaluation of technology suppliers and contract preparation for these type of activities. Manages the T&I department budget. Lead the Pfizer Green Chemistry Steering Team responsible for driving Pfizer's strategic plan, communications plans, key policy decisions, and monitoring of company performance in this area.

-2008-2010 Director
Pfizer Global Research &Development Groton Connecticut Laboratories

Supervise a group of scientists (Ph.D. /MS/BS) that do research based design and development of novel and economical synthetic processes for Active Pharmaceutical Ingredient. This includes groups that engage in all facets of early development, from small scale synthesis in support of Discovery programs, to the development of enabling routes for larger scale production. In addition, experience supervising groups that are responsible for the development of late-stage processes of the commercial synthetic route while providing support for technology transfer to manufacturing sites. Responsibilities also includes defining the strategy to deliver multiple projects within the research portfolio, assigning the necessary resources to project teams and the designing and implementation of the process chemistry department operational workflows.

-2005-2007 Associate Director Chemical Research & Development.
Pfizer Global Research &Development Groton Connecticut Laboratories

Supervise a group of scientists (Ph.D. /MS/BS) that do research based design and development of novel and economical synthetic processes for Active Pharmaceutical Ingredient. This includes groups that engage in all facets of early development, from small scale synthesis in support of Discovery programs, to the development of enabling routes for larger scale production. In addition, experience supervising groups that are responsible for the development of late-stage processes of the commercial synthetic route while providing support for technology transfer to manufacturing sites. Responsibilities also includes defining the strategy to deliver multiple projects within the research portfolio, assigning the necessary resources to project teams and the designing and implementation of the process chemistry department operational workflows.

-2003-2005 Associate Research Fellow
-2000-2003 Senior Research Investigator
-1999-2000 Senior Research Scientist

Pfizer Global Research & Development Groton Connecticut Laboratories
Research based design and development of novel and economical synthetic processes for drug substances. Scale-up of synthetic approaches in pilot plant under cGMP regulations and technology transfer to external manufacturers.

1997-1999 Senior Development Scientist Pfizer Pharmaceutical Groton, Connecticut
Development and scale-up of synthetic approaches in manufacturing facilities under cGMP regulations and technology transfer to external manufacturers and other Pfizer sites.

1994-1997 Senior Process Development Chemist Project Leader

1993-1994 Process Development Chemist

Pfizer Pharmaceutical Inc. Barceloneta, Puerto Rico
Development and scale-up of synthetic approaches in manufacturing facilities under cGMP regulations and technology transfer to external manufacturers and other Pfizer sites.

EDUCATION

Ph.D. in Chemistry, Major in Organic
Dissertation: "From Olefins and Vinylsilanes to Non-Steroidal Anti-inflammatory Agents via B-Alkenyl-9-BBN Derivatives"
Advisor- Professor John A. Soderquist
University of Puerto Rico, Rio Piedras Campus, San Juan Puerto Rico

HONORS AND AWARDS:

2013 Elected ACS Green Chemistry Pharma Roundtable Co-Chair
2010 Pfizer Groton/NL Laboratories 2010 People Leader Award
2007 IChemE Envirowise Team Award
2002 EPA's 2002 Presidential Green Chemistry Award for "Green Chemistry in the Re-Design of the Setraline Process."

SELECTED PUBLICATIONS/ PATENTS

(1) "A Deeper Shade of Green: Evaluating Pharmaceutical API Manufacturing via the Green Aspiration Level" F. Roschangar, J. Colberg, P. J. Dunn, F. Gallou, J. D. Hayler, S. G. Koenig, M. E. Kopach, I. Mergelsberg, J. L. Tucker, R. A. Sheldon and C. H. Senanayake, *Green Chem.*, **2017**, *19*, 281.

(2) "Pharmaceutical Roundtable Study Demonstrates the Value of Continuous Manufacturing in the Design of Greener Processes" Colberg, J. C *et al Org. Process Res. Dev* **2013**, *17*, 1472.

(3) "Go with the Flow" Innovations in Pharmaceutical Technology ` Colberg, J. C *et al* Issue 46, Page 52, 2013

(4) "Practical Synthetic Organic Chemistry: Reactions, Principles, and Techniques" Wiley. Caron, S Editor; Chapter 16 "Green Chemistry" Colberg, J. **2011, 683.**

(5) "Green chemistry tools to influence a medicinal chemistry and research chemistry based organization." Green Chemistry (2008), 10(1), 31-36. Colberg, Juan; Alfonsi, Kim; Dunn, Peter J.; Fevig, Thomas; Jennings, Sandra; Johnson, Timothy A.; Kleine, H. Peter; Knight, Craig; Nagy, Mark A.; Perry, David A.; Stefaniak, Mark.

(6) "Resolution of 3-aminoalkylnitriles" PCT Int. Appl. (2005), 18 pp. WO 2005040097 A1 20050506 . Colberg, J. C; Zambelli , S.; Motterle, R.; Stivanello, M.

(7) "A New and Simplified Process for Preparing N-[4-(3,4-Dichlorophenyl)-3,4-dihydro-1(2H)-naphthalenylidene]methanamine and a Telescoped Process for the Synthesis of (1 S- cis)-4-(3,4-Dichlorophenol)-1,2,3,4-tetrahydro- N-methyl-1-naphthalenamine Mandelate: Key Intermediates in the Synthesis of Sertraline Hydrochloride" Colberg, J. C.; Pfisterer, D.; Taber, G. P. *Org. Process Res. Dev.* **2004**, *8*, 385.

(8) *"Novel Process for Preparing a Ketimine"* Colberg, J. C.; Pfisterer, D.; Taber, G. P. U.S. Patent 6,232,500, 2001.

(9) "Trans-3-Silyl allylic alcohols via the Brown vinylation" Soderquist, J.A.; Colberg, J.C.; Rane, A.; Vaquer, J. *Tetrahedron Lett*. **1995**, *36*, 987.

(10) "Cyclization of a,w-Diborylalkanes via Double Suzuki-Miyaura Coupling" Soderquist, J.A.; Colberg J.C.; Leon, G.; Martinez, I. *Tetrahedron Lett*. **1995**, *35*, 3119.

(11) "Pure Trans-vinylboranes via Dehydroborylation" Soderquist, J.A.; Colberg, J.C.; Rane, A.; Vaquer, J. *Current Topics in the Chemistry of Boron, Royal Society of Chemistry*, UK, **1994**, pp 72.

(12) "Trans-vinylsilanes via Suzuki-Miyaura Coupling" Soderquist, J.A.; Colberg J.C. *Tetrahedron Lett* **1994**, *35*, 6915.

(13) "Trans-vinylboranes from 9-Borabicyclo[3.3.1.]nonane through Dehydroborylation" Soderquist, J.A.; Colberg, J.C.; Rane, A.; Vaquer, J. *J.Am.Chem.Soc.* **1993**, *115*, 6065.

(14) "Ibuprofen and Naproxen via Organoboranes" Soderquist, J.A.; Colberg, J.C.; Rivera, I. *Tetrahedron Lett*. **1992**, *33*, 6915.

(15) "Stereodefined disubstituted vinylsilanes from the silicon-diverted hydrogenation of alkynylsilanes and palladium chemistry" Soderquist, J.A.; Colberg, J.C. *Synlett* **1989**, *1*, 25.

(16) "The Hydroboration for Silylacetylene: Silyl Markovnikov Hydroboration. Route to Pure *Z*-1-(2-borylsilane) and Beta-Ketosilane" Soderquist, J.A.; Colberg, J.C.; Del Valle, L. *J.Am.Chem.Soc.* **1989**, *111*, 4873.